



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,269	04/10/2007	Haoyi Wan	292986US8PCT	5615

22850 7590 08/04/2008
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

NICKERSON, JEFFREY L

ART UNIT	PAPER NUMBER
----------	--------------

2142

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

08/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/584,269	Applicant(s) WAN ET AL.	
	Examiner JEFFREY NICKERSON	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Application No. 10/584,269 filed nationally on 10 April 2007, and internationally on 24 December 2004. The amendment presented on 18 July 2008, which provides change to claims 1-6, the specification, and provides replacement drawings, is hereby acknowledged. Claims 1-6 have been examined.

Drawings

2. The replacement drawing presented on 18 July 2008 is accepted. All prior objections to the drawings are hereby withdrawn.

Specification

The amendment presented on 18 July 2008 providing change to the title, abstract, and specification is noted. The objection to grammatical and spelling errors is hereby withdrawn. The objections to the title and abstract are hereby maintained.

3. The abstract of the disclosure is objected to under 37 CFR 1.72(b) because it contains implied phraseology. The phrase "is provided" in the first sentence falls under the category of implied phraseology. The examiner recommends deleting the first sentence in its entirety. Correction is required. See MPEP § 608.01(b).

4. The title of the invention is objected to under 37 CFR 1.72(a) for failing to be as specific as possible. A new title is required that is clearly indicative of the invention to

which the claims are directed. The following title is suggested: Peer connection selection in a decentralized network based on neighboring physical link characteristics.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1-5, applicant amends into the claims that the node is a physical device. Applicant's arguments allege that the original claims provide support that the node is a physical device. There is no support in the original claims (nor in the specification) that the node is a physical device.

Claim Rejections - 35 USC § 101

The amendment presented on 18 July 2008 providing change to claims 1-5 is noted. All prior rejections under 35 USC 101 are obviated.

Response to Arguments

7. Applicant's arguments filed 18 July 2008 have been fully considered but they are not persuasive.

Applicant's argue that their invention was reduced to practice and they performed due diligence prior to the date of the reference Liu ("AOTO: Adaptive Overlay Topology Optimization in Unstructured P2P Systems", 04 December 2004). There arguments are unpersuasive.

Mere allegations of prior invention hold no weight. Applicant must file an affidavit of declaration under 37 CFR 1.131 and pursuant to the criteria in MPEP 715. No declaration or affidavit was received in the applicant's reply on 18 July 2008.

Furthermore, Liu qualifies as prior art under 35 USC 102(b) because it was published more than one year before the US Effective Filing Date, 24 December 2004, of the present application. Therefore, even if an affidavit or declaration was filed in an attempt to swear back before Liu, it would be ineffective, as Liu *qualifies* as a reference under 35 USC 102(b). See MPEP 715 (II)(A), which states 1.131 affidavits or declarations are not appropriate unless the reference "*only qualifies as prior art under 35 USC 102(a) or (e) [in which case it] is not a 'statutory bar'.*" Liu qualifies as prior art under 35 USC

102(a) and (b) and therefore a 37 CFR 1.131 affidavit or declaration can not be used to antedate Liu.

Therefore, the rejections under 35 USC 102 and 103 are hereby maintained.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-4 and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Liu et al ("AOTO: Adaptive Overlay Topology Optimization in Unstructured P2p Systems", 04 December 2003).

Regarding claim 1, Liu teaches a node device which newly joins a network formed by a plurality of nodes (Liu: pg 4187, Figure 2), the node comprising:

a virtual connection establisher unit configured to establish virtual connections with the plurality of nodes (Liu: pg 4186, section I, paragraphs 3-4 specify a newly connecting node goes out and identifies which nodes are its neighbors);

an average metric value calculator unit configured to calculate an average metric value of routes to the plurality of nodes via each of the virtual connections (Liu: pgs 4187-4188, section II, subsection B, all paragraphs specify that a new node identifies its neighbors and builds a cost table for logical neighbors);

a connection establisher unit configured to establish a connection with the node to which the virtual connection having a smallest average metric value is established (Liu: pg 4187-4188, section II, subsection B, paragraph 3 specifies the node only floods a message to the nodes with least cost (i.e. not non-flooding neighbors)).

Regarding claim 2, Liu teaches further comprising:

an acquirer unit configured to acquire node-to-node connection information of an adjacent node to any node forming the network, from the any node (Liu: pgs 4187-4188, section II, subsection B, paragraph 1 specifies the node exchanges a neighboring cost table with each of its logical neighbors); and wherein

the average metric value calculator unit is configured to calculate the average metric value in accordance with the node-to-node connection information (Liu: pgs 4187-4188, section II, subsection B, paragraph 2 specifies exchanged neighboring cost tables are incorporated into the algorithm for building the spanning tree , i.e. its message flooding strategy).

Regarding claim 3, Liu teaches wherein

the node-to-node connection information includes a node ID (node number) for identifying the adjacent node, a metric value (cost) of a route between the any node and the adjacent node, and a number of the nodes adjacent to the adjacent node (Liu: pgs 4187-4188, section II, subsection B, all paragraphs specifies that cost tables maintain a cost between itself and all logical peers and that these tables are exchanged between

immediately adjacent neighbors; Therefore the received exchanged table inherently contains an entry for every logical node adjacent to the immediate neighbor, therefore the exchanged cost table contains the number of nodes adjacent to the adjacent node; pg 4187, section II, subsection C, all paragraphs specify a minimizing algorithm that determines optimal flooding routes which inherently must contain some type of node identifier so that the node knows which nodes are which, and in the pseudo code Liu uses an integer node number).

Regarding claim 4, Liu teaches wherein:

the metric value includes at least one of a number of hops, network bandwidth, communication costs, delay, load, MTU, or reliability (Liu: pgs 4187-4188, section II, subsection B, paragraph 1 specifies network delay is used for cost).

Regarding claim 6, this method claim comprises limitations corresponding to that of claim 1 and the same rationale of rejection is used, where applicable.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Liu et al ("AOTO: Adaptive Overlay Topology Optimization in Unstructured P2P Systems", 04 December 2003), and further in view of Traversat et al (US 2002/0147771 A1).

Regarding claim 5, Liu teaches wherein

the acquirer unit is configured to probe the for metric value information to be included in the node-to-node connection information (Liu: pg 4187-4188, section II, subsection B, paragraph 2 specifies probing neighbors for cost information).

Liu does not teach wherein the probing identifies a type of a metric value or a combination of metric values to be included in response information.

Traversat, in a similar field of endeavor, teaches wherein probing a peer for information identifies a type of configuration/status requested to be included in response information (Traversat: [0350]-[0356] specifies that various peer information properties may be queried, such as uptime, credentials, etc).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Traversat for requesting characteristics from another peer in the decentralized network. The teachings of Traversat, when implemented in the Liu system, will allow one of ordinary skill in the art to form greedy and dynamic cost tables by requesting information relevant to a node's own interests. One of ordinary skill in the art would be motivated to utilize the teachings of Traversat in the Liu system in order to provide a more wholesome cost table, incorporating more variables into a cost equation and fleshing out its effectiveness.

Cited Pertinent Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Wesley (US 7,039,701 B2) discloses a system for managing a decentralized network including transferring metadata description information to locate content.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Examiner, Art Unit 2142

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2142